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Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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1737 U.S. PTO  
10/6/2003  
07/21/03

## UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	8836-138 DIV (IE10162-US)
First Inventor	Tai-Su PARK
Title	Semiconductor Device Having a Trench....
Express Mail Label No.	EV 329488999 US

### APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1.  Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2.  Applicant claims small entity status.  
See 37 CFR 1.27.
3.  Specification [Total Pages **22**]  
(preferred arrangement set forth below)
  - Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4.  Drawing(s) (35 U.S.C. 113) [ Total Sheets **10** ]
5. Oath or Declaration [ Total Pages **2** ]
  - a.  Newly executed (original or copy)
  - b.  Copy from a prior application (37 CFR 1.63 (d))  
(for continuation/divisional with Box 18 completed)
    - i.  **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6.  Application Data Sheet. See 37 CFR 1.76

**ADDRESS TO:** Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

7.  CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
  - a.  Computer Readable Form (CRF)
  - b. Specification Sequence Listing on:
    - i.  CD-ROM or CD-R (2 copies); or
    - ii.  paper
  - c.  Statements verifying identity of above copies

### ACCOMPANYING APPLICATION PARTS

9.  Assignment Papers (cover sheet & document(s))
10.  37 CFR 3.73(b) Statement  Power of (when there is an assignee)  Attorney
11.  English Translation Document (if applicable)
12.  Information Disclosure Statement (IDS)/PTO-1449  Copies of IDS Citations
13.  Preliminary Amendment
14.  Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
15.  Certified Copy of Priority Document(s) (if foreign priority is claimed)
16.  Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent
17.  Credit Card Payment Form PTO-2038  
Other: for \$750.00

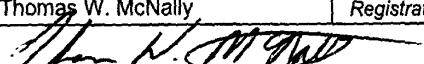
18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

Continuation  Divisional  Continuation-in-part (CIP) of prior application No. **09/ 964,906**

Prior application information: Examinee **Owens, Douglas W.** Group Art Unit: **2811**

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

### 19. CORRESPONDENCE ADDRESS

<input type="checkbox"/> Customer Number or Bar Code Label	(Insert Customer No. or Attach bar code label here)			<input type="checkbox"/> or <input type="checkbox"/> Correspondence address below
Name	Frank Chau, Esq.			
Address	F. CHAU & ASSOCIATES, LLP 1900 Hempstead Turnpike			
City	East Meadow	State	New York	Zip Code 11554
Country	USA	Telephone	516-357-0091	Fax 516-357-0092
Name (Print/Type)	Thomas W. McNally	Registration No. (Attorney/Agent)	48,609	
Signature			Date	21 July 2003

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

07/21/03

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# FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

 Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 750.00)

## Complete if Known

Application Number	
Filing Date	July 21, 2003
First Named Inventor	Tai-Su PARK
Examiner Name	
Art Unit	
Attorney Docket No.	8836-138 DIV (IE10162-US)

## METHOD OF PAYMENT (check all that apply)

 Check  Credit card  Money Order  Other  None
 Deposit Account:

50-0679

F. Chau &amp; Associates, LLP

The Commissioner is authorized to: (check all that apply)

 Charge fee(s) indicated below  Credit any overpayments  
 Charge any additional fee(s) during the pendency of this application  
 Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.
 

## FEE CALCULATION

## 1. BASIC FILING FEE

Large Entity	Small Entity	Fee Code (\$)	Fee (\$)	Fee Description	Fee Paid
1001	750	2001	375	Utility filing fee	750.00
1002	330	2002	165	Design filing fee	
1003	520	2003	260	Plant filing fee	
1004	750	2004	375	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	
<b>SUBTOTAL (1)</b>		<b>(\$ 750.00)</b>			

## 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Fee from below	Fee Paid
Extra Claims	
12 -20** = 0 x 18 = 0	
2 - 3** = 0 x 84 = 0	
<b>280 = 0</b>	

Large Entity	Small Entity	Fee Description
Fee Code (\$)	Fee Code (\$)	
1202	18	2202 9 Claims in excess of 20
1201	84	2201 42 Independent claims in excess of 3
1203	280	2203 140 Multiple dependent claim, if not paid
1204	84	2204 42 ** Reissue independent claims over original patent
1205	18	2205 9 ** Reissue claims in excess of 20 and over original patent
<b>SUBTOTAL (2)</b>		<b>(\$ 0)</b>

\*\*or number previously paid, if greater; For Reissues, see above

## 3. ADDITIONAL FEES

Large Entity Small Entity

Fee Code (\$)	Fee (\$)	Fee Description	Fee Paid
1051	130	2051 65 Surcharge - late filing fee or oath	
1052	50	2052 25 Surcharge - late provisional filing fee or cover sheet	
1053	130	1053 130 Non-English specification	
1812	2,520	1812 2,520 For filing a request for <i>ex parte</i> reexamination	
1804	920*	1804 920* Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805 1,840* Requesting publication of SIR after Examiner action	
1251	110	2251 55 Extension for reply within first month	
1252	410	2252 205 Extension for reply within second month	
1253	930	2253 465 Extension for reply within third month	
1254	1,450	2254 725 Extension for reply within fourth month	
1255	1,970	2255 985 Extension for reply within fifth month	
1401	320	2401 160 Notice of Appeal	
1402	320	2402 160 Filing a brief in support of an appeal	
1403	280	2403 140 Request for oral hearing	
1451	1,510	1451 1,510 Petition to institute a public use proceeding	
1452	110	2452 55 Petition to revive - unavoidable	
1453	1,300	2453 650 Petition to revive - unintentional	
1501	1,300	2501 650 Utility issue fee (or reissue)	
1502	470	2502 235 Design issue fee	
1503	630	2503 315 Plant issue fee	
1460	130	1460 130 Petitions to the Commissioner	
1807	50	1807 50 Processing fee under 37 CFR 1.17(q)	
1806	180	1806 180 Submission of Information Disclosure Stmt	
8021	40	8021 40 Recording each patent assignment per property (times number of properties)	
1809	750	2809 375 Filing a submission after final rejection (37 CFR 1.129(a))	
1810	750	2810 375 For each additional invention to be examined (37 CFR 1.129(b))	
1801	750	2801 375 Request for Continued Examination (RCE)	
1802	900	1802 900 Request for expedited examination of a design application	

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)

## SUBMITTED BY

(Complete if applicable)

Name (Print/Type)	Thomas W. McNally	Registration No. (Attorney/Agent)	48,609	Telephone 516-357-0091
Signature			Date	21 July 2003

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

**PATENT**

Atty. Docket No. 8836-138 DIV (IE10162-US)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

MAIL STOP PATENT APPLICATIONS  
Commissioner for Patents  
PO BOX 1450  
Alexandria VA 22313-1450

**APPLICATION FEE TRANSMITTAL**

Sir:

Transmitted herewith for filing is the patent application of

Inventor(s) : Tai-Su PARK

For: SEMICONDUCTOR DEVICE HAVING A TRENCH ISOLATION  
STRUCTURE AND METHOD FOR FABRICATING THE SAME

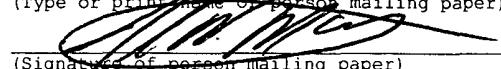
This application is a:

Continuation  
 Continuation-In-Part (CIP)  
 Divisional

of co-pending U.S. application Serial No. 09/964,906  
filed on September 27, 2001

**CERTIFICATION UNDER 37 C.F.R. § 1.10**

I hereby certify that this Application transmittal and the documents referred to as enclosed are being deposited with the United States Postal Service on this date July 21, 2003 in an envelope as "Express Mail Post Office to Addressee" Mailing Label Number **EV 329488999US** addressed to: Mail Stop Patent Application, Commissioner for Patents, PO Box 1450, Alexandria VA 22313-1450.

Thomas W. McNally  
(Type or print name of person mailing paper)  
  
(Signature of person mailing paper)

Enclosed are:

15 page(s) of specification

1 page(s) of Abstract

6 page(s) of claims

10 sheets of drawings  formal  informal

2 page(s) of Declaration and Power of Attorney  
**(copy as filed in co-pending application no. 09/964,906, filed September 27, 2001).**

Certified copy of applications

<u>Country</u>	<u>Appln. No.</u>	<u>Filed</u>
Korea	2001-15149	23 March 2001

from which priority under Title 35 United States Code, § 119  
is claimed

is enclosed.

will follow.

original filed in co-pending application no.  
09/964,906 filed September 27, 2001

Additional papers enclosed:

Preliminary Amendment

Information Disclosure Statement

Form PTO-1449

Other

**Fee Calculation (37 C.F.R. §1.16)**

<u>For</u>	<u>Number Filed</u>	<u>Number Extra</u>	<u>Rate</u>	<u>Basic Fee</u>
				<u>\$750.00</u>
Total				
Claims*	12	-20 = 0	x \$ 18.00	\$ .00
Independent				
Claims	2	-3 = 0	x \$ 84.00	\$ .00
Multiple	[ ] yes	Add'l. Fee	\$280.00	\$
Dependent				
Claims	[X] no	Add'l. Fee	None	= \$ .00
				<b>TOTAL \$750.00</b>

- Verified Statement of "Small Entity" Status Under 37 C.F.R. § 1.27 [ ] is enclosed, [ ] was filed in parent application. Reduced fees under 37 C.F.R. § 1.9(f) (50% of total) paid herewith \$ .00.
- Please charge fee of \$  For recording the attached Assignment by Credit Card Payment Form PTO-2028 enclosed herewith.
- Please charge fee of **\$750.00** to cover the filing fee by Credit Card Payment Form PTO-2038 enclosed herewith.
- Charge fee to Deposit Account No. 50-0679 **TWO (2) COPIES OF THIS SHEET ARE ENCLOSED.**

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\* Includes all independent and single dependent claims and all claims referred to in multiple claims. See 37 C.F.R. § 1.75(c).

Please charge any deficiency as well as any other fee(s) which may become due under 37 C.F.R. § 1.16 and/or 1.17 at any time during the pendency of this application, or credit any overpayment of such fee(s) to Deposit Account No. 50-0679. Also, in the event any extensions of time for responding are required for the pending application(s), please treat this paper as a petition to extend the time as required and charge Deposit Account No. 50-0679 therefor.  
**TWO (2) COPIES OF THIS SHEET ARE ENCLOSED.**

**Relate Back - 35 U.S.C. § 120**

Amend the specification by inserting before the first line the sentence:

"This is a [ ] continuation [ ] continuation-in-part  
 divisional of copending application Serial No.  
09/964,906, filed September 27, 2001.

The prior application is assigned of record to  
SAMSUNG ELECTRONICS CO., LTD,  
recorded on September 27, 2001 Reel 012223, Frame 0890

Date: 21 July 2003

SIGNATURE OF ATTORNEY  
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Reg. No. 48,609

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FC/TWM:mel